

## **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

In the Claims:

Claims 49-53, 56, 58, 77-81, and 83-85 were amended as follows:

Claim 49 (Currently amended) A genetically modified plant cell comprising at least one foreign nucleic acid molecule that ~~increases the expression of at least one endogenous gene encoding~~ encodes an OK1 protein, wherein said genetically modified plant cell has an increased activity of at least one OK1 protein in comparison with corresponding wild type plant cells that have not been genetically modified, and wherein said OK1 protein transfers a phosphate residue of ATP onto already phosphorylated starch.

Claim 50 (Currently amended) The genetically modified plant cell according to claim 49 or 86, wherein the at least one foreign nucleic acid molecule comprises:

- a) a nucleic acid molecule coding a protein having the amino acid sequence of SEQ ID NO: 4;
- b) a nucleic acid molecule coding a protein having an amino acid sequence with at least 95% identity to SEQ ID NO: 4;
- c) a nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO: 3, or the complementary sequence thereof; or

d) a nucleic acid molecule having at least 95% identity to the nucleic acid molecule of a) or c).

Claim 51 (Currently amended) The genetically modified plant cell according to Claim 49 or 86, wherein the genetically modified plant cell comprises a nucleic acid molecule coding a protein having the amino acid sequence of SEQ ID NO: 4.

Claim 52 (Currently amended) The genetically modified plant cell according to Claim 49 or 86, wherein the genetically modified plant cell comprises a nucleic acid molecule coding a protein having an amino acid sequence with at least 95% identity to SEQ ID NO: 4.

Claim 53 (Currently amended) A genetically modified plant cell according to Claim 49 or 86, which synthesises a modified starch in comparison to the corresponding wild type plant cells that have not been genetically modified.

Claim 56 (Currently amended) The genetically modified plant cell according to Claim 49 or 86, wherein the genetically modified plant cell comprises a nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO: 3, or the complementary sequence thereof.

Claim 58 (Currently amended) A plant comprising one or more genetically modified plant cells according to Claim 49 or 86.

Claim 77 (Currently amended) A method of manufacturing a genetically modified plant, comprising:

a) genetically modifying a plant cell by introducing at least one foreign nucleic acid molecule that increases the expression of at least one endogenous gene

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encoding encodes an OK1 protein into said plant cell, wherein said genetically modified plant cell has an increased activity of at least one OK1 protein in comparison with corresponding wild type plant cells that have not been genetically modified, and wherein said OK1 protein transfers a phosphate residue of ATP onto already phosphorylated starch;

- b) regenerating a plant from one or more genetically modified plant cells from step a); and
- c) optionally producing one or more additional plants from a plant according to step b).

Claim 78 (Currently amended) A method of manufacturing a genetically modified plant according to claim 77 or 87, comprising:

- a) introducing at least one foreign nucleic acid molecule into a plant cell, wherein said foreign nucleic acid molecule is:
  - i) a nucleic acid molecule coding a protein having the amino acid sequence of SEQ ID NO: 4;
  - ii) a nucleic acid molecule coding a protein having an amino acid sequence with at least 95% identity to SEQ ID NO: 4;
  - iii) a nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO: 3, or the complementary sequence thereof; or
  - iv) a nucleic acid molecule having at least 95% identity to the nucleic acid molecule of i) or iii),
- b) regenerating a plant from one or more plant cells from step a); and

c) optionally producing one or more additional plants from a plant according to step b).

Claim 79 (Currently amended) The method according to Claim 77 or 87, wherein said nucleic acid molecule is a nucleic acid molecule coding a protein having the amino acid sequence of SEQ ID NO: 4.

Claim 80 (Currently amended) The method according to Claim 77 or 87, wherein said nucleic acid molecule is a nucleic acid molecule coding a protein having an amino acid sequence with at least 95% identity to SEQ ID NO: 4.

Claim 81 (Currently amended) The method according to Claim 77 or 87, wherein said nucleic acid molecule comprises the nucleotide sequence of SEQ ID NO: 3, or the complementary sequence thereof.

Claim 83 (Currently amended) The method according to of claim 77 or 87, wherein said genetically modified plant cell synthesises a modified starch in comparison to the corresponding wild type plant cells that have not been genetically modified.

Claim 84 (Currently amended) The method according to of claim 83, wherein the modified starch has an increased starch phosphate content and/or a modified phosphate distribution.

Claim 85 (Currently amended) The method according to of claim 84, wherein the modified starch has a modified C-3 phosphate to C-6 phosphate ratio.

New claims 86-87 were entered as follows:

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Claim 86 (New) The genetically modified plant cell according to claim 49, wherein said OK1 protein requires already phosphorylated starch as a substrate for transferring further phosphate residues.

Claim 87 (New) The method according to claim 77, wherein said OK1 protein requires already phosphorylated starch as a substrate for transferring further phosphate residues.

Authorization for this examiner's amendment was given in a telephone interview with Alex Spiegler on 02/01/2010.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENT PAGE whose telephone number is (571)272-5914. The examiner can normally be reached on Monday-Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571)-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Brent T Page

/Anne Marie Grunberg/  
Supervisory Patent Examiner, Art Unit 1638